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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,866	05/25/2006	Stefan Haaks	2003P08367WOUS	7442

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER

RAO, SHEELA S

ART UNIT	PAPER NUMBER
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2128

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07/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,866	Applicant(s) HAAKS ET AL.	
	Examiner SHEELA RAO	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/7/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is in response to papers filed on 7 December 2005.
2. Claims 10-18 are pending and presented for examination. The Preliminary amendment filed on December 7, 2005 cancels claims 1-9.
3. Applicant's submission of references on form PTO-1449, filed on December 7, 2005, has been considered to the extent of the English translated portions provided. A signed copy of the form is attached.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the elements of the flowchart in Fig. 2, and state diagrams of Fig. 3 & 4 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). The instant disclosure fails to provide proper antecedence for at least the following elements:

- "capacity of an installation" – what is considered the capacity or level of capacity of the installation is not defined;
- "process variables" - the variables used or considered for the process to be carried out is not known, process variables vary considerable in the art of machining and manufacturing based upon what is being produced. Applicant uses the paper making industry as an example but does not provide sufficient information to interpret what variables are required for the intended process;
- "operating conditions" – what is considered an operating condition in the claimed installation or environment is not clearly defined;
- "control reserve" – what is a control reserve and/or what constitutes a control reserves is left unanswered;

- “control loops” – Applicant’s definition or interpretation of a control loop is nowhere to be found within the instant disclosure so as to establish a definition of the element. Control loops are associated with a variety of definitions in the art based upon their use.
- “filtered” and “sampled” – the action of filtering and sampling is not clearly established in the instant disclosure.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 10-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10: “capacity of an installation used to carry out an industrial process” –

what is considered a capacity is not clear;

“recording the process variables” - how and where this recording is to be done is not clear;

“control reserve” – what is considered to be a reserve or even a control reserve is not found;

“control loops” – what are considered to be the control loops is not understood.

Claim 12: "formulation of measures" – what are considered to be the measures and how they are formulated is not clearly defined.

Claim 18: "filtered" and "sampled" – the process of filtering and sampling is not fully described or defined in a manner of allowing one of skill to filter or sample the data with regard to the instant invention.

Claims 11-18 are rejected as being dependent upon the deficiencies stated with regard to independent claim 10.

8. The term "smallest control reserve" in claim 10 is a relative term which renders the claim indefinite. The term "smallest" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

9. The term "defining a desired increase in capacity" in claim 11 is a relative term which renders the claim indefinite. The terms "capacity" and "desired increase" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The lack of description of "capacity" prevents one of skill to assign or predict an increase in capacity. Furthermore, in order to define a desired increase, the intent and object of the "definer" is necessary as a reason as to what the capacity is and why it is to be increased should be evident.

10. The term "an effect relationship" in claim 14 is a relative term which renders the claim indefinite. The term "effect" is not defined by the claim, the specification does not

provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. A relationship is generally associated between two or more elements, specific to the instant claims, a relationship between what two elements is not clearly defined and what is considered to be an effect is left open with no description or explanation.

11. Claim 10 recites the limitation "the capacity of an installation" in line 1. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 13 recites the limitation "the measures" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 10-16 rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Application Publication No. US 2003/0045962 A1 to Eryurek et al.

Due to the lack of sufficient correspondence, the use and purpose of the claimed limitations of these claims is not clear and definite. Furthermore, a statement of desired result where a limitation has no support within the claim language itself is not proper

and is indefinite. Thus, the reference of prior art is used to teach the instant invention as can best be understood and interpreted in light of the explanation provided within the instant disclosure. It is to be noted that the reference of prior art does not use the same nomenclature for the claimed steps but is understood as performing essentially the same task as per the instant limitations.

Independent claim 10 is directed to a method for increasing the capacity of an installation used to carry out an industrial process, comprising determining a plurality of process variables relevant for the capacity of the installation (paragraph [0002] defines the process variables); recording the process variables during changing operating conditions of the installation (paragraph [0014] describes the use of a microprocessor and its memory for storing data); and determining a smallest control reserve of a plurality of control loops of the installation on the basis of the recorded process variables (paragraph [0009] teaches the use of a model to determine control information and the output of the process based upon the process variables).

Claim 11 further comprises the steps of defining a desired increase in the capacity of the installation, determining the control reserves in the control loops of the installation necessary for the desired capacity increase, and determining the control loops with a control reserve that is too small for the desired capacity increase. Paragraph [0009] teaches that the model is used to provide measurements related to the product output and then uses this data to assess the quality of the process output.

In claim 12 the steps of investigation of the control loops with a control reserve that is too small and formulation of measures for producing the control reserves

required in each case by relieving the load on the relevant control loops and/or by replacing components in the relevant control loops by higher- capacity components is claimed. Eryurek teaches this aspect of the instant invention in paragraph [0010] wherein a deviation in the product quality is detected prior to the actual production of the product and adjustments are made therefrom.

As per claim 13 the step of performing a technical and/or commercial evaluation of the measures is essentially carried through in the manufacturing techniques of the paper or paper pulp industry as per the prior art of reference as described beginning in paragraph [0009].

The core process being defined for determining the relevant process variables and interfaces of the core process with ancillary processes surrounding them being investigated for an effect relationship with a process variable representing the capacity of the installation as claimed in claim 14 is taught in paragraph [0011] of the prior art reference.

Claim 15 defines the installation as an installation for execution of a continuous process such as the manufacture of paper, textiles, plastic or metal foils. Eryurek teaches such in paragraph [0001] as the described process is within a paper manufacturing environment.

Paragraph [0002] teaches the limitation of claim 16, wherein the capacity of the installation is determined by the speed of production on the production line is claimed.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claim 17 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2003/0045962 A1 to Eryurek et al.

The limitations of instant claims 10-16 as taught by Eryurek et al. is stated above.

Claim 17 defines the method according to claim 11 as executed by a service provider company. Although Eryurek does not specifically state the control process being executed by a service provider company, it is well known in the art for specific manufacturing and production companies to undertake the processing of certain products or processes for delivery to other industries. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a paper manufacturing company produce the paper for another industry as it would involve an innumerable amount of services and products for a non-paper manufacturer to produce paper, resulting in wasted time, expenses, and operations.

17. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2003/0045962 A1 to Eryurek et al., as applied to claims 10-16, and further in view of US Patent No. US 5,281,343 A to Lewis et al.

The limitations of instant claims 10-16 as taught by Eryurek et al. is stated above.

Claim 18 defines the process variables of claim 15 as being filtered approximately every 2 seconds and sampled approximately every 5 seconds when they are recorded. Eryurek teaches the production of paper but does not explicitly disclose the process of doing so with regard to filtering and sampling. However, the prior art by Lewis et al. teaches that in a paper manufacturing process, filtering and sampling of dispersed solids is a necessary requirement. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the aspects of the paper manufacturing process as per Lewis to the controlling method of Eryurek so as to teach the complete manufacturing of paper in a controlled process. The specific time limits as claimed is a design choice as it is well known to specify time constraints in different process controlling methods.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah, can be reached on (571) 272-2279. The fax number for the organization where this application or any proceeding papers is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. It should be noted that status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/SHEELA RAO/
Examiner, Art Unit 2128
July 14, 2008

/Alexander J Kosowski/
Primary Examiner, Art Unit 2128